N THE COURT OF PETTY SESSIONS
IELD AT PERTH
VESTERN AUSTRALIA

Complaint No. 19515-16 OF 1992

Date Heard : 2 - 13th AUGUST, 1993
Date Decision Delivered : 17th SEPTEMBER, 1993

BEFORE : R.J. GETHING S.M.

BETWEEN:

Marion Joy HINTZ
OCCUPATIONAL HEALTH, SAFETY AND WELFARE

Complainant

and

BURSWOOD RESORT (MANAGEMENT) LIMITED
t/as BURSWOOD RESORT CASINO

Defendant

REASONS FOR DECISION

APPEARANCES :

Ms N Maxwell appeared for Complainant.
Mr D M J Bennett QC with him Ms E F Vardon appeared for Defendant.

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The complainant in these matters is an officer of the Department for Occupational Health, Safety and Welfare (the Department) and I am satisfied that the complainant is properly authorised to make these complaints.

The defendant company (Burswood) operates the Burswood Resort Casino (the Casino) at 201 Great Eastern Highway, Victoria Park.

The defendant has been charged with two offences in identical terms : the first relating to a period of about 4 hours during the evening of Saturday June 27 into the early morning of Sunday June 28, 1992, and the second a similar period on Saturday 11 and Sunday 12 July, 1992. It was agreed that this period was the busiest period of the week for the Casino.

The substance of both complaints is :

> " ... Burswood Resort (Management) Limited trading as BURSWOOD RESORT CASINO being an employer of persons at its workplace namely the gaming floor and cabaret areas of the Burswood Resort Casino, 201 Great Eastern Highway, Victoria Park, failed to ensure that effective measures were taken to control the level of an airborne contaminant namely Environmental Tobacco Smoke so that the health or safety of its employees was not at risk as required by Regulation 330(1)(c) of the Occupational Health, Safety and Welfare Act 1984; contrary to regulation 330(2) and Section 54 of the Act."

The prosecution is required to prove beyond reasonable doubt, every element of these offences. Evidence that the Defendant traded as Burswood Resort Casino and was the employer of persons at its workplace, being the gaming floor and cabaret areas on the dates alleged, was not disputed and those matters are proved.

The Defendant has disputed the remaining elements of the offences: that it failed to ensure that effective measures were taken to control the level of airborne contaminant namely environmental tobacco smoke (ETS) so that the health or safety of its employees was not at risk.

The Occupational Health, Safety and Welfare Act, 1984 (the Act) was enacted "... *to promote and improve standards for occupational health safety and welfare* ..." (and other incidental purposes). The aim of the Act is to prevent situations arising in workplaces which may result in injury to the person, or harm to the health, of employees.

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Section 19 of the Act imposes a positive duty upon an employer, as far as is practicable, to provide and maintain a working environment in which his employees are not exposed to hazards.

Section 3 of the Act defines *"hazard"* and *"risk"* :-

"Hazard", in relation to a person, means anything that may result in :-

(a) injury to the person;

(b) harm to the health of the person.

"Risk", in relation to any injury or harm, means the probability of that injury or harm occurring.

The word *"may"* means *to have power* (Oxford Dictionary).

The word *"health"* means *soundness of body; that condition in which its functions are duly discharged* (Oxford Dictionary).

Section 60 of the Act empowers the Governor to make regulations to give effect to the purposes of the Act. Under this section, regulations have been made (the Regulations) of which Reg. 330 creates the duty, the breach of which constitutes these complaints against the Defendant. Whilst I find it difficult to agree with any argument that the limitation upon the employer's duty, that is, the words *"so far as its practicable"* contained in Section 19 of the Act, do not apply to this subordinate regulation, nothing in this present action turns on the application of that limitation so it is not necessary for me to consider it.

Officers of the Department, Mr L C Gordon and Dr G W Langley attended the Casino and over the two periods referred to above took samples of the air within the gaming floor and the cabaret areas of the Casino to determine the presence and quantity of ETS in those areas. Separate samples were taken to measure Vapor Phase Nicotine (VPN) and Respirable Suspended Particulates (RSP) in the air. Because of its nature, it is not possible to measure the amount of ETS in the air, but measurement of some of the constituent parts of ETS which can be extracted from the air, have been accepted by many researchers as *"markers"* of the presence and quantity of ETS in the air. VPN has its source only in tobacco smoke so it is a good marker for the presence of ETS. Due to background levels of RSP from other sources, RSP measurements indoors should be supplemented by other measurements before the portion attributable

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to ETS can be determined. I am inclined to agree with evidence from Mr Langley that in a well airconditioned place with good filters in which people are smoking cigarettes, the vast majority of the particulates would be from tobacco smoke.

The officers analysed these samples, or had them analysed, to determine their composition and then calculated the amount of VPN in the atmosphere in micrograms per cubic metre (ug/m^3) and the particulates in milligrams per cubic metre (mg/m^3). The results of this sampling is contained in Exhibits "O", "P", "Q", "R", and "S".

I am satisfied that the methods used for sampling, analysis and calculation are acceptable within the various disciplines. I am satisfied from the evidence of the prosecution that both VPN and RSP are good markers for the presence of ETS. The question of the value of any correlation of the levels of the VPN with the levels of RSP as indicating particular levels of ETS was canvassed in some detail. I think the court would have to be guided by the expert opinion that there is some correlation. The opinion of the expert witnesses in this matter was that the readings indicated a moderate to high level of ETS in the Casino during the relative periods.

The Defendant called highly qualified experts, whose evidence cast some doubt on the correctness of the use by the prosecution witness of the methods of sampling, the analysis and calculation employed, and on the accuracy of the results. This was highly technical evidence of scientific procedures : it was explained as clearly as it could be explained to laypersons and I understood the explanations, but it was a bit difficult for me to assess the gravity of the alleged shortcomings. One thing that did concern me was the corrections of an average loss of the weight of filters used for collecting samples of RSP (Exhibit "S"). The size of the correction (-0.178mg) relative to the sizes of the samples (.044mg, .087mg, -0.052mg, .031mg, .048mg and 0.010mg) seemed out of proportion to the results, and as any one sample filter could have had the same weight loss as either control filter which had the least or greatest weight loss, the difference in the corrected results could vary greatly. In this matter, I do not see the need to be preoccupied with these doubts. The Defendant did not suggest that there was no ETS in the Casino and I think the doubts relate more to the degree of accuracy of the results rather than their use merely to prove the presence of ETS in the Casino.

Having regard to the nature of the premises, that is, a Casino with bars and a cabaret area; the number of people in the Casino at the time; the liklihood that more of those in the community who smoke would go to the Casino then those in the community who do not smoke; evidence by a prosecution witness of smoke haze and a defence witness

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of a mist of smoke; evidence of a witness that 30% - 50% of people in his area of the Casino were smokers; and the results of the testing, which I cannot ignore, I am satisfied that during the relative periods there was a moderate amount of ETS in the gaming floor and the cabaret area of the Casino. I am satisfied beyond reasonable doubt that during the relative periods there was a moderate level of ETS in the Defendant's workplace.

The prosecution has indicated that for the purpose of these complaints it is not relying on cancer or cardic complaints as a *'harm to health'* and is confining that harm to respiratory illness or impairment. It is also agreed by both parties that ETS causes respiratory illness and impairment to young children and the Prosecution is limiting its allegation of harm as harm to adult persons only.

The prosecution called two expert witnesses of undoubted eminence who gave evidence of their opinions, from their own research and study, that ETS causes harm to health.

The defence called two expert witnesses also of undoubted eminence who gave evidence of their opinions, from their own practise, research and study, that ETS does not cause harm to health.

My initial persuasion was that the Defendant must be found not guilty of these charges. The Prosecution has produced expert evidence that ETS causes harm to health; the Defendant has produced expert evidence that ETS does not cause harm to health. A magistrate cannot substitute his own opinion for that of an expert: It is reasonably possible that what the defence witnesses say is true; that reasonable possibility must raise a reasonable doubt and therefore the Prosecution has not proved its case beyond reasonable doubt. As simple as that.

A Court may reject opinion evidence of an expert as to a fact if that opinion conflicts with direct evidence of that fact : **NICKISSON v R. (1963) WAR 114, HOLLINGSWORTH v HOPKINS (1967) QdR 168.** But where the conflict of evidence is between two alternatives of opinion of experts, the Court may not reject either of those alternatives unless the Court is in a position to assure itself of the correctness of one opinion as against the other. **CHAMBERLAIN v THE QUEEN (NO. 2) 153 CLR (1983-1984) p.521 at p.658.**

In the present matter I am bound by this authority of the High Court, but it is not as simple as that because it is evident that the two alternative opinions in the matter are or

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different facts. In saying that ETS causes harm to health, the witnesses for the prosecution include irritation of the respiratory surfaces as a harm to health, whilst the witnesses for the defence say that irritation alone is not a harm to health. The expert witnesses on both sides agree that ETS can cause irritation to the respiratory surfaces and if the Court finds that irritation is harm to health then the defence must fail.

The expert witnesses for the prosecution, Associate Professor P.N. LeSouef and Doctor G.W. Musk, say that irritation means inflammation. De LeSouef said :-

> " By irritation, I would take that to mean inflammation, or evidence consistent with inflammation or respiratory symptoms (transcript p.250)."

Dr Musk said :-

> " So the overall process is one of irritation, which is part of the inflammatory process and leading to repair (transcript p.352)."

I note that these conclusions are not the result of direct evidence from research, but of theory. Dr LeSouef says :-

> " ... there are also several studies in adults to show that exposure relates to disease symptoms which can be reasonably thought to be irritation and inflammation (transcript p.250)."

Dr Musk's statement at transcript p.352 is an explanation of the process of harm.

The expert witnesses for the defence Dr J.H. Lee and Dr B.H. Gandevia, say that irritation is not the same as inflammation and that ETS does not cause inflammation. Dr Lee explains this in detail (transcript pp.409-414) and concludes that irritation can be a precursor to inflammation but it is a question of the extent of irritation and constant or high dose irritation, and he knows no evidence to indicate that it can occur from normal exposure to ETS in the workplace. (Transcript p.413-414). Dr Gandevia says that irritation is not the same as inflammation (transcript p.467) and also give a detailed explanation of the difference. He says :-

> " The inflammation is characterised by certain structure changes which are commonly absent in the irritation. (Transcript p.472)"

The prosecution Doctors say that continued or repeated irritation causes inflammation which, if continued causes respiratory illness or impairment. (Dose response).

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The defence Doctors say that the irritant effects of ETS disappear almost immediately, in a short time, or at the longest, overnight after a person leaves the presence of E.T.S, and there is no evidence of dose response.

Of each of these conflicts of opinion this Court cannot say it is in a position to assure itself of the correctness of the conclusion of the prosecution witnesses against the opinion of the defence witnesses to the degree which would eliminate reasonable doubt as to that conclusion. The experience of ordinary people who sneeze, or whose eyes water when peeling onions, which are both responses to irritation, is that irritation is not the same as inflammation. I would make the finding that irritation, by itself, is not harm to health.

My initial persuasion is confirmed and I find at this point that the prosecution has not proved beyond reasonable doubt that ETS causes harm to health and therefore has not proved that the defendant has failed in its duty not to expose its employees to risk as alleged.

I think I should go further and comment on the persuasiveness of the evidence.

I think that harm to health would not be confined to damage to cells, but would include impairment to bodily functions which includes breathing. It is also evident that a very slight degree of harm to health is still harm to health and could be caught by the regulation, but I do not believe that Parliament intended to impugn the slightest degree of harm - an employer would not be charged with an offence every time his carpenter employee hits his fingrer with his hammer or sneezes from pollen irritation. It is a question of what degree or type of harm is envisaged as harm, the risk of which an employer must eliminate. A Court cannot lay down a rule as to this degree or type and it must vary with each case. Any ruling would probably cover a lesser degree of harm that is cumulative in effect if repeated, or is long lasting, or a greater degree of temporal harm.

The evidence of the defence Doctors was more convincing : both gave details of the particular ways in which the respiratory system might be harmed, whereas the evidence of the prosecution doctors were very general. Dr Musk gave details of the type of damage that can be caused to the surfaces of the respiratory system by reference to the effects on those surfaces of isocyanates. Dr Gandevia said that isocyanates is a classic allergy inducing element and ETS does not induce allergy.

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Doctors Gandevia and Lee gave evidence that the respiratory illnesses involved the upper respiratory tract and not the extremities of the tract, (alveoli), yet Dr Musk said that they were not concerned with the larger particulates because they were cuaght up in the lining of the upper tract and expelled : it was the smaller particulates (RSP) which get past the upper tract into the deeper recesses of the lung that concern him. Dr Musk described some effects of particulates which lead to cancer, which suggests that some of his evidence relates to cancer inducing effects of ETS which are not relevant in this prosecution.

The Doctors on both sides agreed that there is no empirical evidence of respiratory illness being caused by long term exposure to ETS and such evidence could not be obtained as there is no way of excluding from long term trials other factors which could be the cause of respiratory illness. The defence doctors said that there is no evidence at all that exposure to ETS over a long period causes respiratory illness. The report by Kauffman and others (Exhibit "AB") suggested other factors which explain different results between French and American women.

Dr LeSouef said that no one research paper concludes that long term exposure to ETS causes illness or respiratory impairment but that conclusion is reached after reading very many reports. It is not the place of a magistrate with limited medical knowledge to read all the reports to see if his evidence is acceptable : we must rely on his opinion as an expert. But the defence doctors say that those reports do not support such a conclusion. Again I cannot say that their evidence is not acceptable.

I did read some of the reports put in evidence by the prosecution. I would have thought that these reports would be those which supported the prosecution case most strongly, but they appear not to.

One of these reports is the American E.P.A. report (Exhibit "U1") which reviews several other reports. The major conclusions of the report on page 1-1 relating to the effects of ETS on adults refers to that exposure leading to cancer, but to no other effect. Chapter 7.9 of the report covers passive smoking and respiratory symptoms and lung function in adults. Table 7.11 tabulates 6 studies and their results, which really show the contrary to what the prosecution witnesses say.

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The conclusion of the Chapter is at p.7.70 :-

> " In summary, recent evidence suggests that passive smoking has subtle but statistically significant effects on the respiratory health of non smoking adults."

The results set out in the table and the conclusion do not support the *probability* of harm to health which is necessary to create the *"risk"* alleged in these complaints.

I was not happy about references to *"symptoms"* of respiratory illness or impairment in some reports. These include runny nose, sneezing, cough, mucous, wheeze and breathlessness. These symptoms can be slight, and can be evident where there is no respiratory ailment, or they can be severe where there is definite illness. Unless a Court knows the degree and type of the symptoms in issue it cannot determine the probability of harm. The defence doctors referred to these symptoms not as harm to health, but as showing that the respiratory system is indeed healthy and doing the job it is supposed to do, that is, protecting the respiratory surfaces by removing the irritants. None of the studies looks at the question of the symptoms disappearing after a person leaves the presence of ETS

I was further impressed by the general evidence of Dr Lee that it takes 20 years for the physical effects of smoking to become evident in active smokers, and even long term active smokers show recovery from the respiratory effects of their smoking, after they cease smoking, so passive smokers, people exposed to ETS who inhale relatively minor amounts of tobacco smoke,suffer no long term effects.

Whilst ETS is annoying and of discomfort to non smokers it has not been proved at the required standard, or at all, in this prosecution, that it is a risk to the health of the employees at the Casino.

R.J. GETHING
STIPENDIARY MAGISTRATE

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